GYPSY MOTH
Lymantria (Porthetria) dispar (L.)

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The gypsy moth was introduced into this country from Europe in 1869 and occurs generally throughout most of Northeastern America. During favorable conditions for the gypsy moth, outbreaks may appear suddenly and may continue for two to five years in any one location. NATURAL CONTROL factors such as starvation, disease, parasites and predators eventually combine to bring about a sudden collapse of these outbreaks. Prolonged sub-zero temperatures can also kill the overwintering eggs that are not insulated under a snow cover.

Damage

Most healthy hardwoods can usually withstand one to several years of severe defoliation by the gypsy moth. However, white oak is very vulnerable to this pest and hemlock and pine can be killed in one season when 90 to 95% of the foliage is consumed. In hardwood stands the understory and partially-shaded trees (weaker trees) are the first to be killed by repeated defoliation. When present in large numbers the wandering caterpillars and their droppings can become a real nuisance to homeowners in wooded residential areas, cottage owners and those in resort areas.

Hosts

The favored host trees are oak, poplar and gray birch. The caterpillars will feed on most hardwoods except ash. After having fed initially on hardwoods they then become capable of feeding on all conifers except fir.

Life Cycle

The eggs are laid in clusters during late July and August. The clusters which are normally the size of a quarter and covered with buff-colored hairs can be found at the base of trees, on the underside of branches, under loose bark, in crevices, under rocks or other debris on the ground. The egg clusters vary in the number of eggs they contain from a few to several hundred, but usually average about 100 eggs per cluster. The eggs hatch in May, and most of the caterpillars mature by early July after reaching a length of about two inches. The gypsy moth caterpillars are hairy, generally dark brown to black in color, and have a small knob on each side in back of the head (most distinct in small larvae). Fully grown larvae have 5 pairs of blue spots followed by 6 pairs of red spots in rows on their backs. As the caterpillars get larger, their consumption of foliage accelerates and trees may appear to be denuded "overnight," especially since they do most of their feeding during the night. At maturity the caterpillars generally crawl to some protected spot, and pupate in naked reddish brown to brownish black pupal cases. Adult moths emerge about two weeks later to start a new cycle. Empty pupal cases and eggs are often found together. The female moth is of an off-white color with dark markings and with a wing span of about two inches, but it cannot fly so it tends to lay its eggs in sheltered places within crawling distance of the place where it emerged. The males are smaller and darker brown in color with black markings. Males are active fliers and frequently come to lights.

Spread of infestations occurs mainly from wind dispersal of newly-hatched caterpillars. All stages of the gypsy moth can also be carried long distances on vehicles that travel through infested areas.

A potential problem for the following year can be determined in the fall or winter by an egg mass survey.

Control

A. Homeowner With Few Trees

Non-chemical: Limited infestations can be alleviated during the fall and winter by scraping the egg clusters into a container and then destroying them. After egg-hatch and noticeable feeding, the caterpillars can be trapped and destroyed under a burlap skirt tied around the trunk of the tree; or the caterpillars can be contained by applying a band of tanglefoot around the trunk of infested trees to form a barrier to prevent them from wandering and becoming a nuisance around homes.

Insecticides can also be applied to control the caterpillars (see B.).

B. Forested Areas

Chemical*: The home remedies described above may not be effective when host trees are plentiful. Forested areas can be treated by truck-mounted or aerial spray applications. Materials registered to control gypsy moth caterpillars in May and June include the following: *Bacillus thuringiensis* (*Bt*), acephate, carbaryl, and methoxychlor. Some of the above materials may not be in stock by all vendors, so a waiting period may be required after an order is placed.

***NOTE**: These recommendations are not a substitute for pesticide labeling. Read the label before applying any pesticide. Pesticide recommendations are contingent on continued EPA and Maine Board of Pesticides Control registration and are subject to change.

Caution

For your own protection and that of the environment read the pesticide label and apply only in strict adherence to the directions and precautions.